CAD·BIM TECHNOLOGY CENTER

Project #08.MR-7
Asset Management
and
OSD Data Element
Requirements

Project Objectives

- **Identify BIM-related requirements from**
  - Real Property Inventory Requirements (RIPR),
  - Real Property Unique Identifier (RPUID),
  - Site Unique Identifier
- **Recommendations to BIM Corporate Template Dataset to include OSD requirements**

Project Products

- Revised BIM-based data model that includes OSD data element requirements
- Presentation of new OSD Real Property Inventory data model

Identify BIM-related requirements

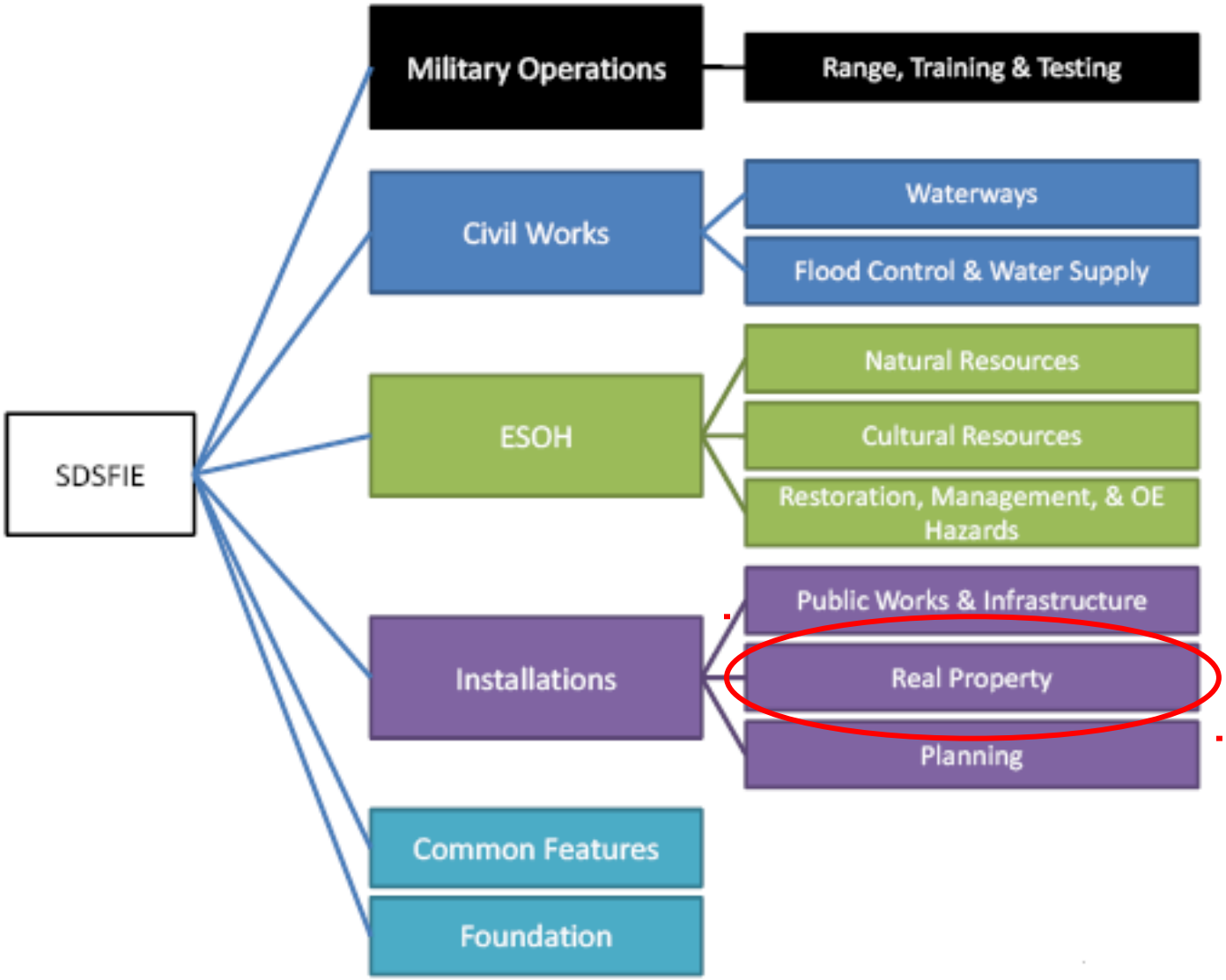
- DoD Business Process Reengineering: Real Property Acceptance Requirements (RPAR) Document
- DoD Real Property Inventory (RPI) Site And Land Recommendations For SDSFIE
- DODI 4165.14: Real Property Inventory and Forecasting
- FGDC Framework Data Content Standard
- GEOFidelis Data Model
- Real Property Information Model (RPIM)
- Real Property Inventory Requirements (App D, Aug 2007)

- Real Property Unique Identification
- SDSFIE to Army Real Property Category Code Mapping (Access DB and Application) plus Army PAM 415-28
- Unified Facilities Criteria (UFC): DoD Facilities Pricing Guide (UFC 3-701-07)

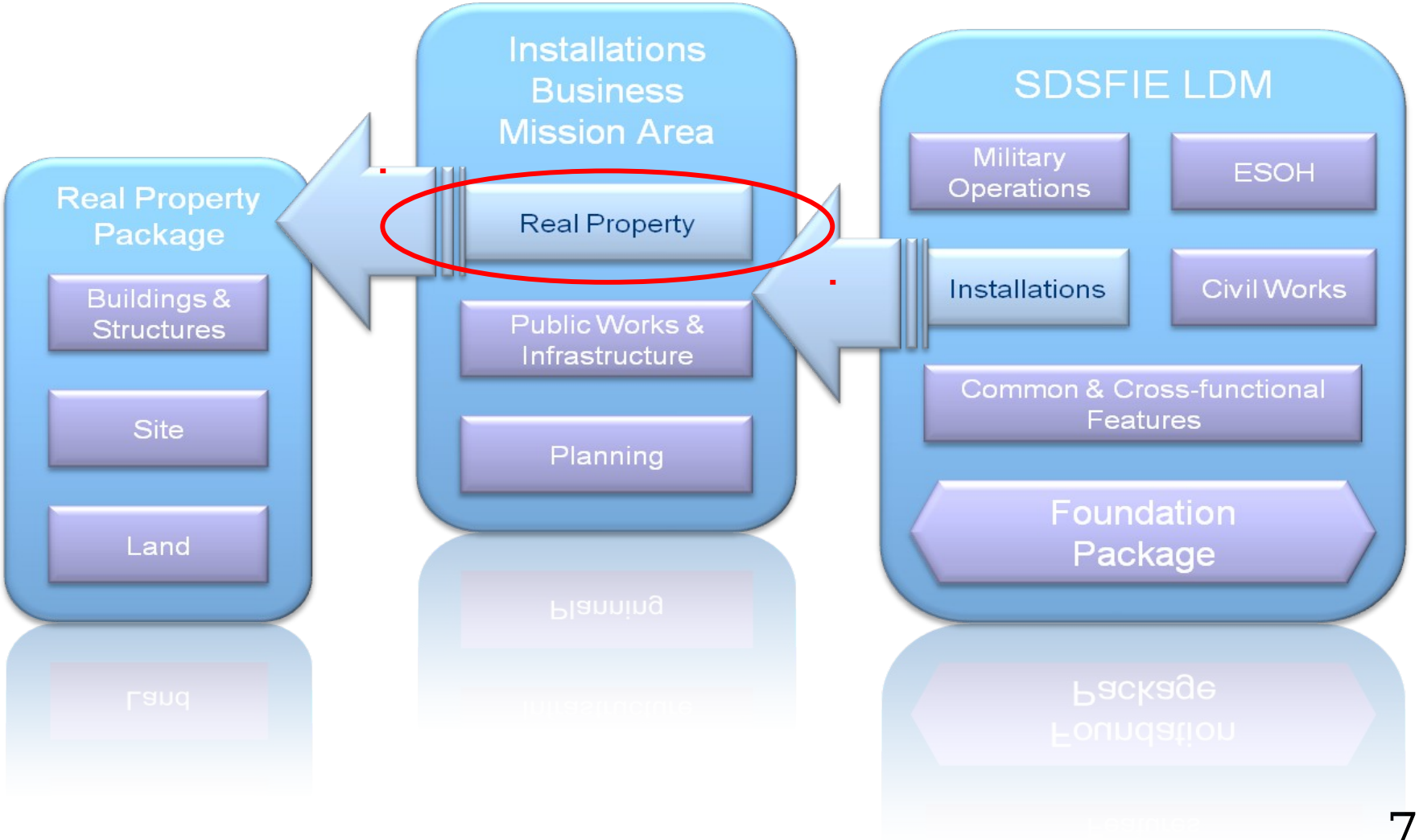
OSD and SDSFIE Effort

- Identify the geospatial data elements required for management and accountability of real property
- Define the geospatial data elements to become the new SDSFIE features (based on RPI and the new SDSFIE Foundation)
- Compare existing SDSFIE features with the new SDSFIE features to eliminate redundancy and ensure that existing data can be migrated

Business Mission Areas

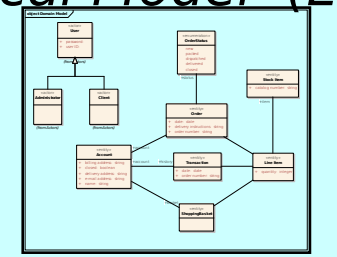


Logical Data Model Organization



Logical Model vs. Physical Model

Logical Model (LDM)



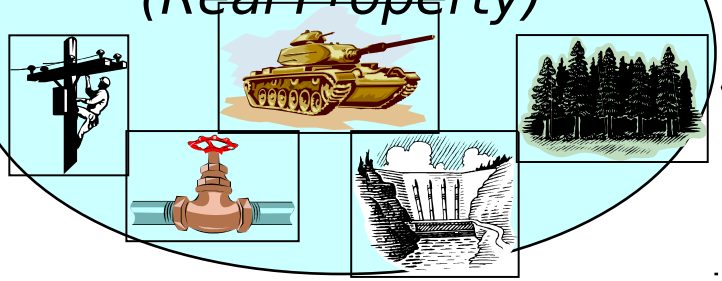
Models mission area concepts in a platform-independent way

Model Transformation

Implements Logical model in a platform-specific way

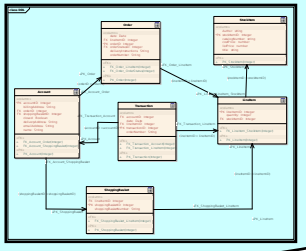
Model Creation

Business Mission Area (Real Property)

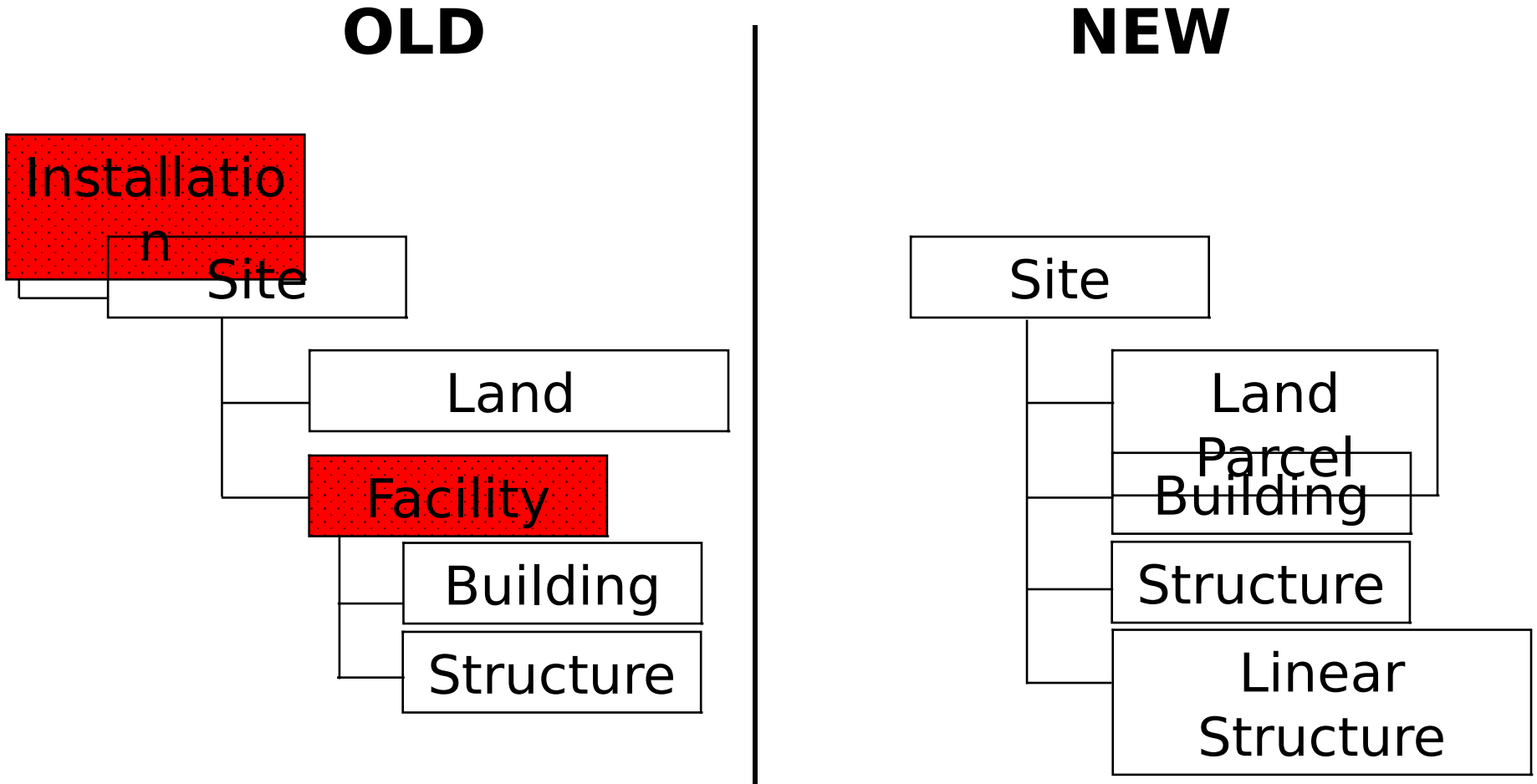


Use

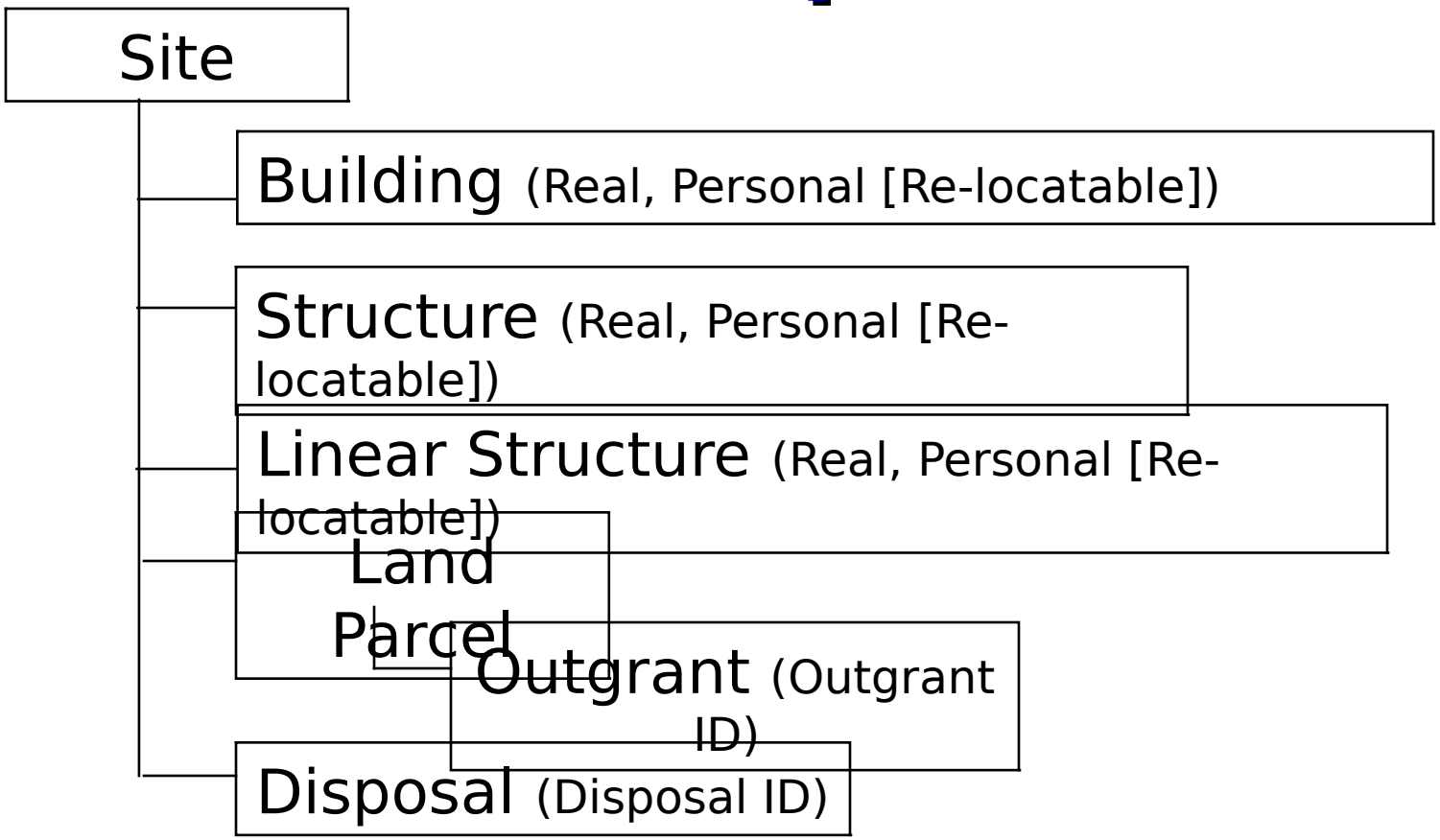
Physical Model (PDM)



Real Property Model



Recommendations to BIM Corporate Template Dataset



RP Model Definitions

Site

A physical location that is or was owned by, leased to, or otherwise possessed or used by the Department of Defense, to include locations under the jurisdiction of the Department of Defense where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located. Source: RPIM, v2.0. As defined by DODI 4165.14, a site may exist in one of three forms 1) land only, 2) facility or facilities only, or 3) land and all the facilities thereon.

RP Model Definitions

Site

installationCode String(6)

The code assigned by the Military Service (includes Washington Headquarters Services) or Agency used to identify the site or group of sites that make up an installation. This represents the official identifying code for a Services installation. Source: RPIM, v2.0.

realPropertySiteUniqueIdentifier String(18)

The unique identifier (UID) used to permanently identify a Site. This UID will be a Real Property Site Unique Identifier (RPSUID). Source: RPIM, v2.0.

RP Model Definitions

Building

A roofed, floored and walled structure that is completely enclosed. Source: RPIM, v2.0, extracted 4/1/2008

realPropertySiteUniqueIdentifier I ({FY07 EOY Reportable} The real property unique identifier (RPUID) is a non-intelligent code used to permanently and uniquely identify a real property asset. Source: RPIM, v2.0)

RP Model Definitions

Structure

A facility classified as other than a building or linear asset. Source: RPIM, v2.0, extracted 4/1/2008. The selection of geometry for a Structure feature is indicated by the primary unit of measure as defined by the DoD Facility Analysis Category (FAC) code.

realPropertySiteUniqueIdentifier I ({FY07 EOY Reportable} The real property unique identifier (RPUID) is a non-intelligent code used to permanently and uniquely identify a real property asset. Source: RPIM, v2.0)

RP Model Definitions

Linear Structure

A distribution system that provides a common service or commodity to more than one building or structure. Source: RPIM, v2.0, extracted 4/1/2008. This feature is used when the portion of the Linear Structure being represented is best done so using a Area or MultiArea geometry as indicated by the primary unit of measure as defined by the DoD Facility Analysis Category (FAC) code.

realPropertySiteUniqueIdentifier I ({FY07 EOY Reportable} The real property unique identifier (RPUID) is a non-intelligent code used to permanently and uniquely identify a real property asset. Source: RPIM, v2.0)

RP Model Definitions

Land Parcel

A parcel is a specific area of land that is under the command or control of a Military Service or the Washington Headquarters Service (WHS). A parcel is created by a transaction whereby a Military Service or the WHS acquires any interest in land, and the interest so acquired is evidenced by a legal instrument. Source: RPIM, v2.0, extracted 4/1/2008

realPropertySiteUniqueIdentifier I ({FY07 EOY Reportable} The real property unique identifier (RPUID) is a non-intelligent code used to permanently and uniquely identify a real property asset. Source: RPIM, v2.0)

RP Model Definitions

Outgrant

A Grant is written agreement which conveys a possessory interest in real property, usually exclusive, for a period of time for a specified consideration. Source: RPIM, v2.0, extracted 4/1/2008. An Outgrant is one that represents a conveyance from DoD to an external party. Specifically, this feature represents the geometry of the Outgrant.

outgrantIdentifier I A unique identifier used to permanently and uniquely identify an outgrant agreement.

RP Model Definitions

Disposal

An action or effort undertaken to describe a dispose PROPERTY. Source: RPIM, v2.0, extracted 4/1/2008. Specifically, this feature represents the geometry of said property.

disposalIdentifier I A unique identifier used to permanently and uniquely identify a Disposal action.

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Real Property Model

ObjectClasses

ObjectClass Name	Type	Geometry	Subtype	
cadastre				SR
Building	FeatureClass	Polygon	-	
Disposal	FeatureClass	Polygon	-	
LandParcel	FeatureClass	Polygon	-	
LinearStructure	FeatureClass	Polygon	-	
Outgrant	FeatureClass	Polygon	-	
Site	FeatureClass	Polygon	-	
Structure	FeatureClass	Polygon	-	
Stand Alone ObjectClass(s)				
FEATURE_METADATA	Table	-	-	
GEOGRAPHIC_NAME	Table	-	-	

Building

Alias Building
Dataset Type FeatureClass
FeatureType Simple

Geometry: Polygon
Average Number of Points:0
Has M: No
Has Z: No
Grid Size:1000

Field Name	Alias	Type	Precn.	Scale	Length	Edit	Null	Req.	Domain Fixed
OBJECTID	OBJECTID	OID	0	0	4	No	No	Yes	Yes
SHAPE	SHAPE	Geometry	0	0	0	Yes	Yes	Yes	Yes
bldg_id	bldg_id	Small Integer	0	0	2	Yes	Yes	No	No
realPropertyUniqueIdentifier	realPropertyUniqueIdentifier	String	0	0	18	Yes	Yes	No	No
sdsFeatureDescription	sdsFeatureDescription	Blob	0	0	0	Yes	Yes	No	No
sdsFeatureName	sdsFeatureName	String	0	0	80	Yes	Yes	No	No
sdsGnisID	sdsGnisID	Small Integer	0	0	2	Yes	Yes	No	No
sdsMetadataID	sdsMetadataID	String	0	0	80	Yes	Yes	No	No

Subtype Name **Default Value** **Domain**

ObjectClass

Index Name	Ascending	Unique	Fields
FDO_OBJECTID	Yes	Yes	OBJECTID
SHAPE_INDEX	Yes	Yes	SHAPE

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Questions